

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 24 AUGUST 2004 (24.08.2004)

Applicant's or agent's file reference
P12047-PCT

FOR FURTHER ACTION
See paragraph 2 below

International application No.

PCT/KR2004/001077

International filing date (day/month/year)

10 MAY 2004 (10.05.2004)

Priority date(day/month/year)

09 MAY 2003 (09.05.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC7 H04B 7/26

Applicant

SAMSUNG ELECTRONICS CO., LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR



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**WRITTEN OPINION OF THE
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International application No.

PCT/KR2004/001077

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/001077

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 49	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	2 - 5, 7 - 42, 44 - 46, 48, 49	YES
	Claims	1, 6, 43, 47	NO
Industrial applicability (IA)	Claims	1 - 49	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1 : "Individual Backoff Time Allocation for Each Ranging Code Set"; IEEE C802.16a-01/57; May 2002

D2 : "A Priority Scheme for IEEE 802.11 DCF Access Method"; Deng, Chang; IEICE TRANS. COMMUN., VOL.E82-B, NO.1 pages 96-102; January 1999

The present invention is related to a method for performing a ranging operation according to a priority order in a broadband wireless access network. However, Claims 1, 6, 43 and 47 lack an inventive step.

As the prior art of the invention of Claim 1, D1 describes a method for classifying a ranging procedure between a base station(BS) and a subscriber station(SS) into an initial ranging operation, a bandwidth request ranging operation, and a periodic ranging operation. The BS sends an Uplink message containing the backoff start and end value of each ranging operation to the SS(D1, page11). When the SS wants to enter a contention resolution process, it shall randomly select a number within its backoff window to decide the transmission opportunities(D1, page 6).

The major different feature between D1 and the invention of Claim 1 is to determine the backoff domains according to the priority order of the ranging operation and to select backoff domains according to the priority order of the performed ranging operations. However, the different feature is disclosed in D2 which describes a method for support priority in a wireless LAN. In D2, a random backoff time is divided into two parts(corresponding to "backoff domain according to the priority order" in Claim 1), and the high priority station uses one part and the low priority station uses the other part(D2, page 99 right hand, lines 7-26). The skilled person in the art will anticipate the invention of Claim 1 by combining D1 and D2. Therefore, Claim 1 lacks an inventive step.

Claim 6 is that the invention of Claim 1 is described from the point of a BS's view. Claim 6 includes all features of Claim 1. Therefore, Claim 6 lacks an inventive step(refer to Claim 1). Claim 43 relates to an apparatus for performing the method of Claim 1, and Claim 47 relates to an apparatus for performing the method of Claim 6. Therefore, Claims 43 and 47 lack an inventive step(refer to Claims 1 and 6).